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UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re U.S. Patent Application of:

NOLAN et al.	)	Docket: 11388.00274
Serial No.: 10/713,614	)	Confirmation No. 2513
Filed: November 14, 2003	)	Examiner: Talbot, Brian K.
For: METHOD AND APPARATUS FOR	)	
EXTRUSION COATING OF FLUORESCENT	)	Art Unit: 1792
<u>LIGHT TUBES</u>	)	Customer No. 21878

Charlotte, North Carolina , January 5, 2009

MAIL STOP APPEAL BRIEF - PATENTS  
Board of Patent Appeals and Interference  
US Patent and Trademark Office  
PO Box 1450  
Alexandria, Virginia 22313-1450

**APPEAL BRIEF**

Sir:

Applicant submits this Appeal Brief, and Petition for a One Month Extension of Time with \$65.00 fee attached hereto, in support of its appeal from the Final Office Action mailed July 29, 2008, rejecting as unpatentable pending claims 1, 2, 5-7, 9-11, and 13-42 in this application. A check in the amount of \$270.00 is submitted herewith to cover the fee for filing this Appeal Brief. The Commissioner is authorized to charge any other fee that is due or to credit any fee overpayment that has been made to Deposit Account No. 18-1215.

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**REAL PARTY IN INTEREST**

The real party in interest is Shat-R-Shield, Inc., which is the assignee of record of the present application.

### **RELATED APPEALS AND INTERFERENCES**

Applicant knows of no related appeals or interferences in this matter.

### **STATUS OF CLAIMS**

The status of the claims is as follows:

Rejected claims: The rejected claims are claims 1, 2, 5-7, 9-11, and 13-42.

Canceled claims: Claims 3, 4, 8, 12, and 56 were previously cancelled.

Withdrawn claims: Claims 43-55 have been withdrawn from consideration.

Claims on Appeal: The claims on appeal are claims 1, 2, 5-7, 9-11, and 13-42.

## STATUS OF AMENDMENTS

This application was filed as a Continuation of Application Serial No. 10/238,696, filed September 10, 2002. As filed, the application included claims 1-55 from the parent case. A Preliminary Amendment filed simultaneously with the application added claim 56, thereby presenting claims 1-56 for examination in this application.

In a Restriction Requirement dated September 6, 2005, election was required between two groups of claims:

(a) claims 1-42 and 56; and

(b) claims 43-55.

Applicant traversed the Restriction Requirement in its Response of September 28, 2005, but elected claims 1-42 and 56 for examination if the Restriction Requirement was not withdrawn.

In an Office Action dated November 14, 2005, the Examiner deemed the Restriction Requirement proper and claims 43-55 were withdrawn from consideration. Additionally, multiple bases of rejection were set forth:

(a) claim 15 was rejected as assertedly indefinite under 35 U.S.C. 112, second paragraph;

(b) claims 1-14, 19-22, 24-28, 30-32, 36 and 56 were rejected as assertedly anticipated under 35 U.S.C. 102(e) by Dupont (U.S. Patent No. 6,452,325);

(c) claims 1-7, 9-11, 13, 15-16, 18-21, 24, 26-27, 30, 33, 36-37, and 56 were rejected as assertedly anticipated under 35 U.S.C. 102(e) by Payne (WO02/16049);

(d) claims 1, 3-4, and 6-8 were rejected as assertedly anticipated under 35 U.S.C. 102(b) by Nolan '850 (U.S. Patent No. 4,499,850);

(e) claims 24-28 and 33-35 were rejected as assertedly obvious under 35 U.S.C. 103(a) over Dupont;

(f) claims 6, 11, 15-18, 26, and 38-41 were rejected as assertedly obvious under 35 U.S.C. 103(a) over Dupont and Weingarten (U.S. Patent No. 3, 706,216);

(g) claims 23, 29, and 42 were rejected as assertedly obvious under 35 U.S.C. 103(a) over Dupont and Duzyk (U.S. Patent No. 5,532,549)

(h) claim 42 was rejected as assertedly obvious under 35 U.S.C. 103(a) over Dupont, Weingarten, and Duzyk.

(i) claim 37 was rejected as assertedly obvious under 35 U.S.C. 103(a) over Dupont and Payne; and

(j) claims 31-32 and 34-35 were rejected as assertedly obvious under 35 U.S.C. 103(a) over Payne.

Applicant filed an Amendment in response to the Office Action on February 13, 2006, in which independent claims 1, 10, and 38 were amended, claim 56 was cancelled, dependent claims 2-5, 8, 15, and 33-35 were amended, and dependent claims 6, 7, 9, 11-14, 16-32, 36-37, and 39-42 remained in their original unamended form. Applicant argued that claims 1-5, 8, 10, 15, 33-35, and 38, as so amended, and claims 6, 7, 9, 11-14, 16-32, 36-37, and 39-42 were patentable over the cited references.

On April 25, 2006, a Final Office Action was mailed to Applicant in which multiple bases of rejection were set forth:

(a) claims 1-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 36 were rejected as assertedly anticipated under 35 U.S.C. 102(e) by the Dupont Application (U.S. Patent Application No. 2002/0187705);

(b) claims 24, 26-28, and 33-35 were rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application;

(c) claims 6, 11, 15-18, and 26 were rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and Weingarten (U.S. Patent No. 3, 706, 216);

(d) claims 8, 12, 14, and 25 were rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and Sica (U.S. Patent No. 6,043,600);

(e) claims 23, and 29 were rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and Duzyk (U.S. Patent No. 5,532,549);

(f) claim 37 was rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and Payne;

(g) claims 38-41 were rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Weingarten, and Sica;

(h) claim 42 was rejected as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Weingarten, Sica, and Duzyk.

Applicant filed an Amendment After Final and a Request For Reconsideration in response to the Office Action on August 24, 2006, in which independent claims 1, 10, and 38 were amended and dependent claims 2-9, 11-37, and 39-42 remained in either their original unamended form or their form as amended in the Response dated February 13, 2006. Applicant argued that claims 1, 10, and 38, as so amended, and claims 2-9, 11-37, and 39-42 were patentable over the cited references.

In an Advisory Action dated September 8, 2006, the amendments of August 24, 2006 were not entered and claims 1-42 remained rejected.

Applicant filed a Request for Continued Examination on September 21, 2006.



On December 5, 2006, an Office Action was mailed to the Applicant withdrawing the finality of the previous Office Action and in which multiple bases of rejection were set forth:

(a) claims 1-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 30-35 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and either Nolan '886 (U.S. Patent No. 4,804,886) or Nolan '332 (U.S. Patent No. 4,507,332);

(b) claims 6, 11, 15-18, and 26 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Weingarten;

(c) claims 8, 12, 14, and 25 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Sica;

(d) claims 23 and 29 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Duzyk;

(e) claim 37 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Payne;

(f) claims 38-41 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, Weingarten, and Sica; and

(g) claim 42 as assertedly obvious under 35 U.S.C. 103(a) over Dupont, Weingarten, Sica, and Duzyk.

Applicant filed an Amendment in response to the Office Action on March 5, 2007, in which no claims were amended. Applicant argued that claims 1-42, as presented, were patentable over the cited references.

On May 17, 2007, a Final Office Action was mailed to the Applicant in which multiple bases of rejection were set forth:

(a) claims 1-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 30-35 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and either Nolan '886 (U.S. Patent No. 4,804,886) or Nolan '332 (U.S. Patent No. 4,507,332);

(b) claims 6, 11, 15-18, and 26 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Weingarten;

(c) claims 8, 12, 14, and 25 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Sica;

(d) claims 23 and 29 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Duzyk;

(e) claim 37 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Payne;

(f) claims 38-41 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, Weingarten, and Sica; and

(g) claim 42 as assertedly obvious under 35 U.S.C. 103(a) over Dupont, Weingarten, Sica, and Duzyk.

Applicant filed an Amendment After Final and a Request For Reconsideration in response to the Office Action on July 10, 2007, in which independent claims 1, 10, and 38 were amended and dependent claims 2-9, 11-37, and 39-42 remained in either their original unamended form or their form as amended in the Response dated February 13, 2006. Applicant argued that claims 1, 10, and 38, as so amended, and claims 2-9, 11-37, and 39-42 were patentable over the cited references.

In an Advisory Action dated July 31, 2007, the amendments of July 10, 2007 were not entered and claims 1-42 remained rejected. The Advisory Action, however, indicated that the

“proposed amendment (if entered per filing an RCE) appears to overcome the art of record absent further consideration and/or search.”

Applicant filed a Request for Continued Examination on August 23, 2007.

Applicant was sent a Notice of Non-Compliant Amendment on September 11, 2007.

Applicant filed a Response to the Notice of Non-Compliant Amendment on October 10, 2007 in which the text of all of the pending claims was recited.

On December 21, 2007, an Office Action was mailed to the Applicant withdrawing the finality of the previous Office Action. Additionally, the Office Action objected to the amendment of October 10, 2007 as entering new matter. Further, multiple bases of rejection were set forth:

- (a) claims 8 and 12 as assertedly indefinite under 35 U.S.C. 112, second paragraph;
- (b) claims 1-42 as assertedly failing to comply with the written description requirement under 35 U.S.C. 112, first paragraph;
- (c) claims 1-42 as assertedly being non-enabled under 35 U.S.C. 112, first paragraph;
- (d) claims 1-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 30-35 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and either Nolan ‘886 (U.S. Patent No. 4,804,886) or Nolan ‘332 (U.S. Patent No. 4,507,332);
- (e) claims 6, 11, 15-18, and 26 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan ‘332 or Nolan ‘886, and Weingarten;
- (f) claims 8, 12, 14, and 25 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan ‘332 or Nolan ‘886, and Sica;
- (g) claims 23 and 29 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan ‘332 or Nolan ‘886, and Duzyk;

(h) claim 37 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Payne;

(i) claims 38-41 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, Weingarten, and Sica; and

(j) claim 42 as assertedly obvious under 35 U.S.C. 103(a) over Dupont, Weingarten, Sica, and Duzyk.

Applicant filed an Amendment in response to the Office Action on April 22, 2008, in which independent claims 1, 10, and 38 were amended, claims 3, 4, 8, and 12 were cancelled and dependent claims 5-7, 9, 11, 13-37, and 39-42 remained in either their original unamended form or their form as amended in the Response dated February 13, 2006. Applicant argued that claims 1, 10, and 38, as so amended, and claims 5-7, 9, 11, 13-37, and 39-42 were patentable over the cited references.

On July 29, 2008, a Final Office Action was mailed to the Applicant in which multiple bases of rejection were set forth:

(a) claims 1,2, 5-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 30-35 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application and either Nolan '886 (U.S. Patent No. 4,804,886) or Nolan '332 (U.S. Patent No. 4,507,332);

(b) claims 6, 11, 15-18, and 26 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Weingarten;

(c) claims 14, and 25 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Sica;

(d) claims 23 and 29 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Duzyk;

(e) claim 37 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Payne;

(f) claims 38-41 as assertedly obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, Weingarten, and Sica; and

(g) claim 42 as assertedly obvious under 35 U.S.C. 103(a) over Dupont, Weingarten, Sica, and Duzyk.

Applicant filed a Notice of Appeal on October 29, 2008.

The claims on appeal are reproduced in the attached Claims Appendix. All amendments to date have been entered.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

Independent Claim 1 is directed towards a method of coating a chain of fluorescent light tubes. Each fluorescent light tube has a transparent or translucent main light body (see page 2, lines 16-17) and end caps at the opposite ends of the main light body (see page 2, lines 16-17) with the end caps having electrically conductive pins extending from at least one of the end caps (see page 2, line 25). The method claimed in Claim 1 comprises the steps of (1) heating only the end caps of the fluorescent light tubes prior to coating the fluorescent light tubes on a coating conveyor system (see page 3, lines 16-19); (2) sequentially loading the fluorescent light tubes on the coating conveyor system (see page 3, lines 19-20); (3) sequentially feeding the fluorescent light tubes at a consistent travel rate with a gap between the fluorescent light tubes to a coating station, which includes a coating machine (see page 7, lines 15-19); (4) applying a coating to the chain of fluorescent light tubes and the gaps between the fluorescent light tubes (see page 7, lines 12-15) with the entirety of the end caps uncovered at the coating station for direct contact of the coating with the main light body and with the end caps without any other element physically intervening the coating and the end caps while maintaining the gap at a length to prevent the coating from contacting the electrically conductive pins of the end caps of the fluorescent light tubes (see page 2, lines 28-32 and page 3, lines 1-2); and (5) conveying the coated fluorescent light tubes to a stacking and/or packaging station (see page 3, lines 30-32).

Independent Claim 10 is directed towards a method for coating a plurality of fluorescent light tubes. Each fluorescent light tube has a transparent or translucent main light body (see page 2, lines 16-17) and end caps at the opposite ends of the main light body (see page 2, lines 16-17) with the end caps having electrically conductive pins extending from at least one of the end caps (see page 2, line 25). The method claimed in Claim 10 comprises the steps of (1) heating only

the end caps of a the plurality of fluorescent light tubes prior to coating the light tubes (see page 3, lines 16-19); (2) conveying the plurality of light tubes sequentially in longitudinal alignment with one another at a consistent travel rate with a gap between the fluorescent light tubes (see page 7, lines 9-11); and (3) extruding a coating of molten thermo-plastic material about each light tube and the gap between the light tubes with the entirety of the end caps uncovered such that the coating is substantially in direct intimate contact with the main light body and with the end caps without any other element physically intervening the coating and the end caps while maintaining the gap at a length to prevent the coating from contacting the electrically conductive pins on the end caps of the light tubes (see page 7, lines 12-19).

Independent Claim 38 is directed towards a method for coating a plurality of at least two fluorescent light tubes. Each fluorescent light tube has a transparent or translucent main light body (see page 2, lines 16-17) and end caps at the opposite ends of the main light body (see page 2, lines 16-17) with the end caps having electrically conductive pins extending from at least one of the end caps(see page 2, line 25). The method claimed in Claim 28 has the steps of (1) heating only the end caps of a the plurality of light tubes prior to coating the light tubes (see page 3, lines 16-19); (2) conveying the plurality of light tubes sequentially in longitudinal alignment with one another at a consistent travel rate with a gap between the fluorescent light tubes (see page 7, lines 9-11); (3) extruding a coating of molten thermo-plastic material about each light tube and the gap between the light tubes with the entirety of the end caps uncovered while applying a vacuum to evacuate air from between each light tube and the coating to promote direct intimate contact of the coating with the main light body and with the end caps of each light tube without any other element physically intervening the coating and the main light body and the end caps while maintaining the gap at a length to prevent the coating from contacting the

electrically conductive pins on the end caps of the light tubes(see page 7, lines 12-19); (4) cooling the coating below the softening temperature of the thermo-plastic material (see page 7, lines 19-22); and (5) separating each light tube from the plurality of light tubes (see page 7, lines 22-25).



### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds of rejection to be reviewed on appeal are:

- (a) whether claims 1,2, 5-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 30-35 are unpatentable as obvious under 35 U.S.C. 103(a) over the Dupont Application and either Nolan '886 (U.S. Patent No. 4,804,886) or Nolan '332 (U.S. Patent No. 4,507,332);
- (b) whether claims 6, 11, 15-18, and 26 are unpatentable as obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Weingarten;
- (c) whether claims 14, and 25 are unpatentable as obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Sica;
- (d) whether claims 23 and 29 are unpatentable as obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Duzyk;
- (e) whether claim 37 is unpatentable as obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, and Payne;
- (f) whether claims 38-41 are unpatentable as obvious under 35 U.S.C. 103(a) over the Dupont Application, Nolan '332 or Nolan '886, Weingarten, and Sica; and
- (g) whether claim 42 is unpatentable as obvious under 35 U.S.C. 103(a) over Dupont, Weingarten, Sica, and Duzyk;

## ARGUMENT

### Rejection of Claims 1,2, 5-7, 9-11, 13, 19-22, 24, 26-28, 30-32, and 30-35 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '705 and Nolan '886 or Nolan '332

All of the pending rejections rely in whole or in part upon the base citation of Dupont '705 with either Nolan '886 or Nolan '332. Therefore, Applicant directs its comments towards this combination below. Additionally, as noted in many of Applicant's Responses, it is believed that the citation to "Dupont '325" is in error and that Dupont '705 was the intended reference. As this assumption has never been corrected in a subsequent Office Action, Applicant continues to assume such in this Appeal Brief.

#### A. The Cited References, Either Alone or in Combination, Fail to Teach Leaving the End Caps Uncovered During the Coating Process.

Applicant submits that Dupont '705 teaches the importance of always covering the end caps during coating. As seen, for example, in paragraphs [0005], [0007], and [0021] of Dupont '705, Dupont '705 explicitly teaches that the end caps, called ferrules in the Dupont disclosure, should first be covered, prior to the coating step, by a plastic end cap or a length of silicone tubing, secured to the end caps/ferrules either by an initial application of an adhesive to the end caps or an initial pre-coating immersion of the end caps into powdered ethylene vinyl acetate. Although Dupont '705 describes differing embodiments and alternatives, every disclosed embodiment and alternative in the Dupont '705 reference provides for some initial application to each end cap of adhesive or pre-coating followed by a protective plastic cap or sleeve, after which the coating of the lamp applies the protective polymeric coating over such cap or sleeve.

Thus, Dupont '705 fails altogether to teach or suggest the present invention's concept of leaving the end caps uncovered during the coating process for "direct" contact of the coating not only with the main light body but also with the end caps "without any other element [e.g., adhesive, pre-coating, protective cap or sleeve] physically intervening the coating and the end

caps.” It is submitted then that Dupont ‘705 not only fails to teach or suggest the present invention, but that it clearly teaches the contrary, i.e., Dupont ‘705 teaches away from the present invention. As such, the present invention cannot be anticipated nor rendered obvious by Dupont ‘705 given W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984), which held that a prior art reference must be considered in its entirety, including those portions that would lead away from the claimed invention. Hence, the fact that the Dupont ‘705 patent teaches away from the present invention cannot be ignored and the proposed combination of references is improper.

Further, the Examiner relies upon Dupont ‘705 in combination with either Nolan ‘886 and Nolan ‘332 to teach the elements of the present invention that Dupont ‘705 does not disclose. However, Applicant also submits that both Nolan ‘886 and Nolan ‘332 teach away from the present invention. In fact, both Nolan references specifically teach away from having the end caps uncovered.

Nolan ‘332 teaches masking the electrical connecting pins and all of the end caps except for a predetermined portion thereof, applying a coating of powder to the glass envelope and the predetermined portion of the end caps, melting and fusing the powder on the end caps to form the applied powder into a subsequently uniform thick coating of polymeric material, and subsequently unmasking the electrical connecting pins and end caps (see, e.g., col. 2, lines 47-68 and col. 3, lines 1-3). In this method of powder application as set forth in Nolan ‘332 (and unlike that of the present invention), it is essential that there are masked portions of the end caps and that only the unmasked portions of the end caps are exposed to the fluidized bed of polymeric powder. It is also essential to the functionality of the Nolan ‘332 invention that a coating of

powder from the fluidized bed is applied to the glass envelope and that the predetermined portions of the end caps that are not covered by the masking members.

Therefore, in light of these disclosures in the Nolan patents, it is submitted that the Nolan references are incapable of teaching the invention of the present application, which recites as an element the leaving of the end caps uncovered. Further, the Nolan patents, like the Dupont patent, explicitly teach away from the present application. Accordingly, it is submitted that the proposed combination of the references is both improper and, in light of their teachings, insufficient to render the invention of the present application obvious.

B. The Nolan Patents Teach Away From the Present Invention As They Teach the Heating of the Light Tube.

In addition to that discussed above, there are further aspects of Nolan '332 that teach away from the present invention. Nolan '332 teaches heating the light tube above the melt temperature of the polymeric material to melt and fuse the powder onto the glass envelope and the unmasked portions on the end caps to form the coating on the light tube. Applicant submits that heating the entire light tube is disadvantageous and teaches away from the present invention because such a heating method risks loosening the adhesive attaching the end caps to the glass envelope, thus compromising the integrity of the light tube. As set forth in paragraph [0008] of the present invention, this distinction is significant in that in the present invention the coating and the end caps form a sealed sheath around the glass envelope. This adherence of the thermo-plastic material to the end caps, instead of to the glass envelope, ensures the containment of any glass shards within the sealed sheath if the light tube is broken.

Nolan '886 specifically follows the teachings of Nolan '332 with respect to the method of masking of a portion of the end caps. Additionally, Nolan '886 incorporates by reference Nolan '332. Nolan '886 states that its method is in accordance with the fluorescent lamp coating

method or process disclosed in Nolan '332 such that the entire fluorescent lamp except for the portions of the end caps and connecting pins which are masked off as taught in Nolan '332 are coated with an integrally formed coating formed in accordance with Nolan '332. Accordingly, Nolan '886 teaches away from the present invention for the same reasons set forth above.

As all three references demonstrably teach away from the present invention and as none of them correct the underlying deficiencies of the other cited references (none of which are alleged in the Office Actions as teaching such characteristics), it is submitted that the rejection of the claims is improper and it is requested that the rejection of all of the pending claims be withdrawn.

C. Admission of Allowability by the July 31, 2007 Advisory Action.

Finally, in the Advisory Action dated July 31, 2007, it was admitted that the "proposed amendment (if entered per filing an RCE) appears to overcome the art of record absent further consideration and/or search." As can be seen in the resulting Office Actions, no new art was discovered, nor were any new arguments presented as to why the pending claims were not allowable in view of the entered amendments. Accordingly, in view of the admission of July 31, 2007, it is requested that the claims be allowed for this additional reason.

**Rejection of Claims 6, 11, 15-18, and 26 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '705 and Nolan '886 or Nolan '332 and Further in View of Weingarten '216**

As these claims are dependent claims, Applicant relies upon the arguments made regarding independent claims 1 and 10 above.

**Rejection of Claims 14 and 25 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '705 and Nolan '886 or Nolan '332 and Further in View of Sica '600**

As these claims are dependent claims, Applicant relies upon the arguments made regarding independent claims 1 and 10 above.

**Rejection of Claims 23 and 29 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '705 and Nolan '886 or Nolan '332 and Further in View of Duzyk '549**

As these claims are dependent claims, Applicant relies upon the arguments made regarding independent claims 1 and 10 above.

**Rejection of Claim 37 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '705 and Nolan '886 or Nolan '332 and Further in View of Payne '049**

As these claims are dependent claims, Applicant relies upon the arguments made regarding independent claims 1 and 10 above.

**Rejection of Claims 38-41 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '705 and Nolan '886 or Nolan '332 and Further in View of Weingarten '216 and Sica '600**

As neither Weingarten nor Sica correct the issues raised in the preceding discussion of the Dupont '705, Nolan '886 or Nolan '332 patents (nor were they cited as teaching such in the Office Actions), Applicant relies upon the above arguments regarding the Dupont '705, Nolan '886, and Nolan '332 patents to appeal this rejection of Claims 38-41.

**Rejection of Claim 42 Under 35 U.S.C. 103(a) as Obvious in View of Dupont '325 and Weingarten '216, Sica '600 and Duzyk '549**

As this claim depends on claim 38, Applicant relies upon the arguments made regarding independent claim 38 above.

### **Conclusion**

Accordingly, for all of the reasons set forth above, it is respectfully submitted that the claims presented in this application patentably define over the cited references, as well as all other art of record. Favorable reconsideration and formal allowance of the present application are therefore respectfully requested. Applicant respectfully requests that the Examiner's final rejections of claims 1, 2, 5-7, 9-11, and 13-42 be reversed.

Respectfully submitted,

A handwritten signature in cursive script that reads "Susan S. Jackson".

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-- Attorney for Applicant

## **CLAIMS APPENDIX**

1. (Rejected) A method of coating a chain of at least two fluorescent light tubes, each fluorescent light tube having a transparent or translucent main light body and end caps at the opposite ends of the main light body with the end caps having electrically conductive pins extending from at least one of the end caps, the method comprising the steps:

heating only the end caps of the fluorescent light tubes prior to coating the fluorescent light tubes on a coating conveyor system;

sequentially loading the fluorescent light tubes on the coating conveyor system;

sequentially feeding the fluorescent light tubes at a consistent travel rate with a gap between the fluorescent light tubes to a coating station, which includes a coating machine;

applying a coating to the chain of fluorescent light tubes and the gaps between the fluorescent light tubes with the entirety of the end caps uncovered at the coating station for direct contact of the coating with the main light body and with the end caps without any other element physically intervening the coating and the end caps while maintaining the gap at a length to prevent the coating from contacting the electrically conductive pins of the end caps of the fluorescent light tubes; and

conveying the coated fluorescent light tubes to a stacking and/or packaging station.

2. (Rejected) A method according to claim 1 further comprising removing excess coating from the end caps of the fluorescent light tube.



3. (Canceled) A method according to claim 1, further comprising loading a plurality of fluorescent light tubes on the coating conveyor system to form a chain of fluorescent light tubes with gaps therebetween.
4. (Canceled) A method according to claim 3, further comprising applying the coating to the chain of fluorescent light tubes and gaps.
5. (Rejected) A method according to claim 4 1, further comprising separating each fluorescent light tube from the chain after the coating step.
6. (Original-Rejected) A method according to claim 4 1, further comprising cooling the chain after the coating step.
7. (Original-Rejected) A method according to claim 1, further comprising applying a vacuum during the coating step.
8. (Canceled) A method according to claim 1, further comprising preheating a portion of the fluorescent light tube before the loading step.
9. (Original-Rejected) A method according to claim 1 wherein the coating step further comprises extruding a molten thermo-plastic material.

10. (Rejected) A method for coating a plurality of at least two fluorescent light tubes each fluorescent light tube having a transparent or translucent main light body and end caps at the opposite ends of the main light body with the end caps having electrically conductive pins extending from at least one of the end caps, the method comprising the steps:

heating only the end caps of a the plurality of fluorescent light tubes prior to coating the light tubes;

conveying the plurality of light tubes sequentially in longitudinal alignment with one another at a consistent travel rate with a gap between the fluorescent light tubes; and

extruding a coating of molten thermo-plastic material about each light tube and the gap between the light tubes with the entirety of the end caps uncovered such that the coating is substantially in direct intimate contact with the main light body and with the end caps without any other element physically intervening the coating and the end caps while maintaining the gap at a length to prevent the coating from contacting the electrically conductive pins on the end caps of the light tubes.

11. (Original-Rejected) The method according to claim 10, further comprising cooling the coating below the softening temperature of the thermo-plastic material after the coating step.

12. (Canceled) The method according to claim 10, further comprising heating the end caps of the plurality of light tubes before the conveying step.

13. (Original-Rejected) The method according to claim 10, further comprising applying a vacuum during the extruding step.

14. (Original-Rejected) The method according to claim 10 12, wherein the step of heating the end caps comprises applying an infra-red heater to the end caps.

15. (Rejected) The method according to claim 11, wherein the step of conveying the plurality of light tubes comprises impelling each light tube in advance of the extruding step and impelling each light tube following the cooling step.

16. (Original-Rejected) The method according to claim 11, wherein the cooling step comprises applying a coolant to the light tubes.

17. (Original-Rejected) The method according to claim 16, wherein the cooling step comprises applying a water bath to the light tubes.

18. (Original-Rejected) The method according to claim 16, wherein the cooling step comprises applying air to the light tubes.

19. (Original-Rejected) The method according to claim 10, wherein the extruding step comprising extruding a continuous coating of molten thermo-plastic material thereby connecting sequentially coated light tubes.

20. (Original-Rejected) The method according to claim 19 further comprising separating the continuous coating between the end caps of sequential light tubes.

21. (Original-Rejected) The method according to claim 20, wherein the separating step comprises applying a cutting tool to the continuous coating between the end caps of sequential light tubes.

22. (Original-Rejected) The method according to claim 20, further comprising accelerating each light tube to effect separation between sequential light tubes.

23. (Original-Rejected) The method according to claim 10, further comprising trimming excess coating from the end caps of the light tubes and labeling the light tubes.

24. (Original-Rejected) The method according to claim 10, further comprising automatically controlling the conveying and feeding steps via a controller

25. (Original-Rejected) The method according to claim 10, further comprising automatically controlling the heating, conveying, and feeding steps via a controller.

26. (Original-Rejected) The method according to claim 11, further comprising automatically controlling the conveying, feeding, and cooling steps via a controller

27. (Original-Rejected) The method according to claim 20, further comprises automatically controlling the conveying, feeding, and separating steps via a controller.

28. (Original-Rejected) The method according the claim 22, further comprises automatically controlling the conveying, feeding, separating, and accelerating steps via a controller.

29. (Original-Rejected) The method according the claim 23, further comprises automatically controlling the conveying, feeding, trimming and labeling steps via a controller.

30. (Original-Rejected) The method according to claim 10, wherein the coating step further comprises maintaining a uniform thickness of the molten thermo-plastic material encircling the light tubes to between about 10 mil and about 22 mil.

31. (Original-Rejected) The method according to claim 30, wherein the coating step further comprises maintaining a uniform thickness of the molten thermo-plastic material encircling the light tubes to between about 14 mil and about 20 mil.

32. (Original-Rejected) The method according to claim 30, wherein the coating step further comprises maintaining a uniform thickness of the molten thermo-plastic material encircling the light tubes to between about 16 mil and about 18 mil.

33. (Rejected) The method according to claim 10, wherein the conveying step comprises maintaining a gap between sequential light tubes at a length of between about 0.5 inch and about 2.5 inches.

34. (Rejected) The method according to claim 33, wherein the conveying step comprises maintaining a gap between sequential light tubes at a length of between about 1.0 inch and about 2.0 inches.

35. (Rejected) The method according to claim 33, wherein the conveying step comprises maintaining a gap between sequential light tubes at a length of about 1.5 inch.

36. (Original-Rejected) The method according to claim 10, further comprising the step of adjusting a rate of travel of the light tubes by regulating the conveying step.

37. (Original-Rejected) The method according to claim 36, wherein the adjusting step comprises maintaining the travel rate at between about 16 ft/min and about 60 ft/min.

38. (Rejected) A method for coating a plurality of at least two fluorescent light tubes each fluorescent light tube having a transparent or translucent main light body and end caps at the opposite ends of the main light body with the end caps having electrically conductive pins extending from at least one of the end caps, the method comprising the steps:

- a) heating only the end caps of a the plurality of light tubes prior to coating the light tubes;
- b) conveying the plurality of light tubes sequentially in longitudinal alignment with one another at a consistent travel rate with a gap between the fluorescent light tubes;
- c) extruding a coating of molten thermo-plastic material about each light tube and the gap between the light tubes with the entirety of the end caps uncovered while applying a vacuum to evacuate air from between each light tube and the coating to promote direct intimate contact of

the coating with the main light body and with the end caps of each light tube without any other element physically intervening the coating and the main light body and the end caps while maintaining the gap at a length to prevent the coating from contacting the electrically conductive pins on the end caps of the light tubes;

d) cooling the coating below the softening temperature of the thermo-plastic material; and

e) separating each light tube from the plurality of light tubes.

39. (Original-Rejected) The method according to claim 38, further comprising automatically controlling the heating, conveying, extruding, cooling and separating steps via a controller.

40. (Original-Rejected) The method according to claim 38, further comprising accelerating each light tube after the separating step.

41. (Original-Rejected) The method according to claim 38, further comprising trimming excess coating from each light tube after the separating step.

42. (Original-Rejected) The method according to claim 39, further comprising labeling each light tube.

43. (Withdrawn From Consideration) A machine for coating a plurality of fluorescent light tubes comprising:

a) a heating table; and

b) a cross head extruder

wherein the plurality of light tubes is preheated on the heating table before being fed to the cross head extruder.

44. (Withdrawn From Consideration) The machine according to claim 43, further comprising a vacuum assembly attached to the cross head extruder to apply a vacuum therein to promote a direct and intimate contact between the plurality of light tubes and the coating of a molten thermo-plastic material extruded by the cross head extruder.

45. (Withdrawn From Consideration) The machine according to claim 43, wherein the heating table comprises a plurality of infra-red panels.

46. (Withdrawn From Consideration) The machine according to claim 43, further comprising a cooling station disposed adjacent to the cross head extruder for cooling the plurality of light tubes therein.

47. (Withdrawn From Consideration) The machine according to claim 46, wherein the cooling station comprises a chilled water bath.

48. (Withdrawn From Consideration) The machine according to claim 46, wherein the cooling station comprises an air supply.



49. (Withdrawn From Consideration) The machine according to claim 46, further comprising a cutting station for separating the plurality of light tubes, the cutting station disposed adjacent the cooling station.

50. (Withdrawn From Consideration) The machine according to claim 49, wherein the cutting station comprises a cutting tool.

51. (Withdrawn From Consideration) The machine according to claim 50, wherein the cutting station comprises a heated shearing system.

52. (Withdrawn From Consideration) The machine according to claim 43, further comprising an acceleration system to effect separation of the plurality of light tubes.

53. (Withdrawn From Consideration) The machine according to claim 43, further comprising a trimming station for removing excess coating from the plurality of light tubes.

54. (Withdrawn From Consideration) The machine according to claim 43, further comprising a labeling station for labeling the plurality of light tubes.

55. (Withdrawn From Consideration) The machine according to claim 43, further comprising a control unit connected thereto for automatic control thereof.

56. (Canceled) A method for coating a florescent lamp having an exterior surface comprising:  
extruding a polymeric coating upon said fluorescent lamp such that the extruded polymeric  
coating is in intimately conforming embracing contact with the exterior surface of said  
fluorescent lamp.

## **EVIDENCE APPENDIX**

None.

**RELATED PROCEEDINGS APPENDIX**

None.